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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,591

09/29/2003

Jeffrey J. Zamowski

623.010PA

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25891

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10/05/2005

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EXAMINER

LE, QUE TAN

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/673,591

Applicant(s)

ZARNOWSKI ET AL.

Examiner

Que T. Le

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because of the following informalities: In claim 1, on line 5, "couled" should be changed to "coupled".

Appropriate correction is required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10, 12, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, phrase "wherein one electrode of a transfer transistor thereof" is confusing. Where exactly is the transfer transistor coming from? The exact relationship between the transfer transistor and the other claimed elements/components has not been clearly defined.

In claim 12, "said transfer transistor" on line 3 lacks a proper antecedent basis.

In claims 19 and 29, the phrase "sharing said pixel output transistor" on lines 2 and 2-3, respectively is unclear. The exactly information/data being shared has not been clearly defined.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2878

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Applicant's admitted prior art (Figures 1-3 and pages 6-9 of the present specification), hereinafter referred to as admitted prior art.

Admitted prior art shows a photosensitive array with a plurality of pixels arranged in columns and rows, wherein each pixel having two transistors, including: a pixel output transistor(40) having a sense electrode and an output electrode; a reset transistor (42) with a gate coupled to receive a reset signal and an output coupled to the sense electrode of the pixel output transistor; and a photosensitive element (38) having an output electrode coupled to the sense electrode of the pixel output transistor.

Claims 1, 3-5, 8, 10-12, 14 and 15-20, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Gowda et al 5,898,168.

Gowda et al disclose an image sensing system having a plurality of pixel circuits arranged in rows and columns with each pixel circuit having at least two transistors, comprising a pixel output transistor (13) having a sense electrode and an output electrode; a reset transistor (11) having a gate coupled to receive a reset signal and an output coupled to the sense electrode of the pixel output transistor; and a photosensitive element (6) having an output electrode coupled to the sense electrode of the pixel output transistor (node 17) and a gate electrode coupled to receive gating signals. The pixel circuits disposed in the same column and/or in successive columns in a single row. The photosensitive element includes a sense node FET (photogate) with a gate electrode and a transfer transistor with one electrode connected to a photodiode (7) and a gate connected to receive a control signal to operate timing of transfer and reset of the photodiode (at least columns 1-2). Each pixel circuit includes a second reset transistor (12) with a gate coupled to receive a second reset signal and an output coupled to the sense electrode of the pixel output transistor (Fig. 3B). The pixel output transistor of each pixel circuits is sharing information with that of other pixel circuits.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, 7, 9 and 13, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gowda et al 5,898,168.

With respect to claims 2, 6 and 7, Gowda et al lack a clear inclusion whether or not a sense node surrounding the photogate, it would have been inherently included, however, if not, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gowda et al accordingly in order to provide a sensing region for the photosensitive element. The further inclusion of a segment shared by the sense nodes of the photosensitive elements would have been obvious for similar reasons set forth above.

With respect to claim 9, although Gowda et al fail to specify a formation of a charge snare device, it would have been inherently included, however, if not, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gowda et al accordingly, if so desired, without altering the basis operation of the system.

With respect to claim 13, although Gowda et al fail to disclose a color filter on each of the photosensitive element, the use of a color filter in an imaging device for providing color image signal would have been obvious to one of ordinary skill in the imaging art. It would have been obvious to modify Gowda et al accordingly in order to provide more accurate desired image information for the system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Que T. Le whose telephone number is (571) 272-2438.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta, can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Que T. Le', with a stylized flourish at the end.

Que T. Le

Primary Examiner